

All Escapade & Easy Raider Owners

25th February 2010

Dear Owner,

Escapade airworthiness alert

The day before yesterday (23rd February) it was discovered that one of the struts supporting the horizontal stabiliser on a low hours Escapade had fractured. See figure 1. The fracture had occurred at the flattened end of the strut where it bolts onto the tailplane spar. See figures 2 and 3. The fracture surface is indicative of a fatigue failure, rather than an overload failure, and has also corroded. See figure 4. The strut ends that had not failed had defined tooling marks, even on the outside of the bend. This may have acted as a fatigue crack initiator on the failed end. See figure 5. The Easy Raider has the same part fitted.

I am writing to you:

- To make you aware of this problem so that you can check your aircraft, and
- To request feedback (good as well as bad!) so that we – Reality Aircraft and the BMAA – can better understand the scale of the problem when deciding our future course of action.

To inspect the strut the underside of the horizontal stabiliser needs to be accessible, clean and well illuminated. Consider lifting the tail of aircraft in tail-wheel configuration.

Look for any cracking of the paint or corrosion showing through the paint. Robustly pull the strut (by pushing the horizontal stabiliser upwards) and twist the strut to ‘open’, and help identify, any crack. If there are any signs of distress the strut should be removed from the aircraft and the end cleaned (e.g. shot blasted) to allow further investigation (e.g. dye penetrant inspection).

Please **do** feedback the results of your inspection. We’re particular interested in:

- Whether there is any cracking of your aircraft’s strut ends or not.
- Whether there are tooling marks on your aircraft’s strut ends or not. A strut may have to be removed to assess this satisfactorily.

Please **do not** hesitate to get in touch with any queries or comments.

Yours sincerely,



Ben Syson

Notes:

- Do not fly with a cracked strut.
- Add careful inspection of the strut ends to your daily inspection.
- If a strut is removed and found to be OK, protect with a clear lacquer before returning to the aircraft.
- Refit struts in accordance with the UK Build Manual.
- Disturbed primary structure requires a second inspection by a suitably qualified person before further flight.



Figure 1: Escapade showing location of affected strut.



Figure 2: View from underneath horizontal stabiliser showing crack at flattened end of strut.



Figure 3: View from rear of horizontal stabiliser (elevator raised) showing crack at flattened end of strut.



Figure 4: Fracture surface (strut removed from aircraft)

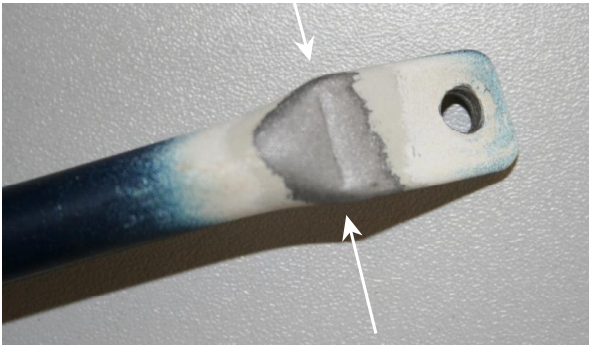


Figure 5: Tooling marks on outside of bend (undamaged strut – shot blasted)